

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An electro-optical device comprising, above a substrate:
a data lines-line extending in a first direction;
a scanning lines-line extending in a second direction which intersects the data
lines; line;
a pixel electrodes-electrode and thin film transistors-transistor provided so as
to correspond to an intersection regions-region of the data lines-line and the scanning lines;
line;
a storage capacitors-capacitor electrically connected to the thin film transistors
transistor and the pixel electrodes-electrode, dielectric films which constitute the storage
capacitors-capacitor being made of a plurality of at least two layers including different
materials and one of the plurality of at least two layers being made of a material having a
higher dielectric constant than those-that of the other layers; and layer;
a relay layer that electrically connects the pixel electrode and the storage
capacitor and that at least partially covers the storage capacitor to shade the storage capacitor
from incident light; and
a light shielding layer provided between the data lines-line and the pixel
electrodes, electrode, the light shielding layer being formed along the data lines-line and
having a width wider than the width of the data lines, line, the light shielding layer being
formed to cover the entire data lines-line in plan-view. view, the light shielding layer at least
partially covering the storage capacitor.
2. (Canceled)

3. (Original) The electro-optical device according to Claim 1, the dielectric films being made of silicon oxide films and silicon nitride films.

4. (Currently Amended) The electro-optical device according to Claim 1, the storage ~~capacitors~~ capacitor being formed above a semiconductor layers-layer of the thin film ~~transistors~~ transistor and below the pixel ~~electrodes~~ electrode.

5. (Currently Amended) The electro-optical device according to Claim 1, a planarization process being performed on surfaces of an interlayer insulating film which is positioned beneath the pixel ~~electrodes~~ electrode.

6. (Currently Amended) The electro-optical device according to Claim 1, ~~each of~~ the data ~~lines~~ line being formed as the same film as one of a pair of electrodes ~~which~~ constitute ~~each of~~ the storage ~~capacitors~~ capacitor.

7. (Currently Amended) The electro-optical device according to Claim 1, ~~further comprising: the~~ relay ~~layers~~ layer electrically connecting the pixel ~~electrodes~~ electrode to one of a pair of electrodes ~~which constitute a corresponding of the~~ storage capacitor.

8. (Currently Amended) The electro-optical device according to Claim 7, the light shielding layer and the relay layer having a multi-layer structure including a titanium nitride layer formed over an aluminum layer, the light shielding layers-layer being formed as from the same films as the relay ~~layers~~ layer.

9. (Withdrawn-Currently Amended) ~~An~~ The electro-optical device ~~comprising,~~ above a substrate; according to Claim 1,

~~data lines extending in a first direction;~~

~~scanning lines extending in a second direction which intersects the data lines;~~

~~pixel electrodes and thin film transistors provided so as to correspond to intersection regions of the data lines and the scanning lines;~~

~~storage capacitors electrically connected to the thin film transistors and the pixel electrodes, dielectric films which constitute the storage capacitors being made of a plurality of layers including different materials and one of the plurality of layers being made of a material having a higher dielectric constant than those of the other layers; and~~
~~shielding layers provided between the data lines and the pixel electrodes, the shielding layers~~ layer being made of transparent conducting materials and formed in a mat shape over the entire surface of the substrate.

10. (Canceled)

11. (Withdrawn-Currently Amended) ~~An~~ The electro-optical device according to Claim 1, comprising, above a substrate:

~~data lines extending in a first direction;~~
~~scanning lines extending in a second direction which intersects the data lines;~~
~~pixel electrodes and thin film transistors provided so as to correspond to intersection regions of the data lines and the scanning lines;~~
~~storage capacitors electrically connected to the thin film transistors and the pixel electrodes, dielectric films which constitute the storage capacitors being made of a plurality of layers including different materials and one of the plurality of layers being made of a material having a higher dielectric constant than those of the other layers; and~~
~~the thin film transistors~~ transistor including a semiconductor layers ~~layers~~ layer having a channel regions ~~region~~ which extend ~~extends~~ in a longitudinal direction and a channel adjacent regions ~~region~~ which extend ~~extends~~ in the longitudinal direction further from the channel ~~regions; region; and~~

the scanning lines line including a main body parts ~~part~~ extending in a direction intersecting the longitudinal direction and having a gate electrodes ~~electrode~~ of the

thin film ~~transistors~~transistor overlapping the channel ~~regions~~region in plan view; ~~and view,~~
and

_____ a horizontal ~~protrusions~~protrusion protruding from the main body ~~parts~~part in
the longitudinal direction at ~~sides~~a side of the channel adjacent ~~regions~~region in plan view.

12. (Currently Amended) The electro-optical device according to Claim 1, the
thin film ~~transistors~~transistor including a semiconductor ~~layers~~layer having a channel
~~regions~~region which ~~extend~~extends in a longitudinal ~~direction;~~direction,

_____ the electro-optical device further ~~comprising;~~comprising

_____ an upper light-shielding ~~films~~film covering at least the channel ~~regions~~region
of the thin film ~~transistors~~transistor from the upper ~~side;~~and side,

_____ at least a part of the upper light-shielding ~~films~~film being formed in a concave
shape in the cross section which is perpendicular to the longitudinal direction of the channel
~~regions~~region as viewed from the channel ~~regions;~~region.

13. (Withdrawn-Currently Amended) ~~An~~The electro-optical device according to
Claim 1, comprising, above a substrate:

_____ ~~data lines extending in a first direction;~~

_____ ~~scanning lines extending in a second direction which intersects the data lines;~~

_____ ~~pixel electrodes and thin film transistors provided so as to correspond to~~
~~intersection regions of the data lines and the scanning lines;~~

_____ ~~storage capacitors electrically connected to the thin film transistors and the~~
~~pixel electrodes, dielectric films which constitute the storage capacitors being made of a~~
~~plurality of layers including different materials and one of the plurality of layers being made~~
~~of a material having a higher dielectric constant than those of the other layers; and~~

_____ the thin film ~~transistors~~transistor including a semiconductor ~~layers~~layer
having a channel ~~regions~~region which ~~extend~~extends in the first ~~direction;~~direction, and

~~_____the scanning lines~~line including ~~a main line portions~~portion having ~~a gate electrodes~~electrode of the thin film ~~transistors~~transistor which ~~face~~faces the channel ~~regions~~region with ~~a gate insulating films~~film interposed therebetween and extending in the second direction which intersects the first direction in plan ~~view~~view, and

~~_____a surrounding portions~~portion extending to at least partially surround the semiconductor ~~layers~~layer from the main line ~~portions~~portion at ~~positions~~a position which ~~are~~is separated from the channel ~~regions~~region by a predetermined distance in the second direction in plan view.

14. (Currently Amended) ~~An~~The electro-optical device according to Claim 1, comprising, ~~above a substrate~~:

~~_____data lines extending in a first direction;~~

~~_____scanning lines extending in a second direction which intersects the data lines;~~

~~_____pixel electrodes and thin film transistors provided so as to correspond to intersection regions of the data lines and the scanning lines;~~

~~_____storage capacitors electrically connected to the thin film transistors and the pixel electrodes, dielectric films which constitute the storage capacitors being made of a plurality of layers including different materials and one of the plurality of layers being made of a material having a higher dielectric constant than those of the other layers; and~~

~~_____the thin film transistors~~transistor including ~~a semiconductor layers~~layer having ~~a channel regions~~region which ~~extend~~extends in the first ~~direction~~direction, and

~~_____the scanning lines~~line including ~~a main line portions~~portion having ~~a gate electrodes~~electrode of the thin film ~~transistors~~transistor which ~~face~~faces the channel ~~regions~~region with ~~a gate insulating films~~film interposed therebetween and extending in the second direction which intersects the first direction in plan ~~view~~view, and

~~_____a vertical protrusions protrusion~~ protruding downwardly from the main line ~~portions-portion~~ at ~~positions-a position~~ which ~~are-is~~ separated from the channel region by a predetermined distance in the second direction in plan view.

15. (Currently Amended) The electro-optical device according to Claim 14, further ~~comprising:~~ comprising,
~~_____on the substrate, a lower light-shielding films-film~~ which ~~cover-covers~~ at least the channel ~~regions-region~~ from the lower ~~side;~~ and side,
~~_____the vertical protrusions-protrusion~~ contacting the lower light-shielding ~~films~~ film at a front ends-end thereof.

16. (Withdrawn-Currently Amended) ~~An~~ The electro-optical device according to Claim 1, comprising, above a substrate:
~~_____data lines extending in a first direction;~~
~~_____scanning lines extending in a second direction which intersects the data lines;~~
~~_____pixel electrodes and thin film transistors provided so as to correspond to intersection regions of the data lines and the scanning lines;~~
~~_____storage capacitors electrically connected to the thin film transistors and the pixel electrodes, dielectric films which constitute the storage capacitors being made of a plurality of layers including different materials and one of the plurality of layers being made of a material having a higher dielectric constant than those of the other layers; and~~
~~_____the thin film transistors-transistor~~ including a semiconductor layers-layer having a channel regions-region which ~~extend-extends~~ in the first ~~direction;~~ direction, and
~~_____the scanning lines-line~~ including a main line portions-portion having a gate electrodes-electrode of the thin film ~~transistors-transistor~~ which ~~face-faces~~ the channel ~~regions-region~~ with a gate insulating films-film interposed therebetween and extending in the second direction which intersects the first direction in plan ~~view;~~ and view,

~~_____~~the main line ~~portions-portion~~ including an inside-groove portions-portion which ~~are-is~~ provided inside ~~grooves-a groove~~ which ~~are-is~~ etched in the substrate and ~~cover covers~~ at least a part of the channel ~~regions-region~~ from the ~~sides-side~~.

17. (Withdrawn-Currently Amended) ~~An~~ The electro-optical device according to Claim 1, comprising, above a substrate:

~~_____~~data lines ~~extending in a first direction;~~

~~_____~~scanning lines ~~extending in a second direction which intersects the data lines;~~

~~_____~~pixel electrodes and thin film transistors provided so as to correspond to intersection regions of the data lines and the scanning lines;

~~_____~~storage capacitors electrically connected to the thin film transistors and the pixel electrodes, dielectric films which constitute the storage capacitors being made of a plurality of layers including different materials and one of the plurality of layers being made of a material having a higher dielectric constant than those of the other layers; and

~~_____~~the thin film transistors ~~transistor~~ including semiconductor layers ~~layer~~ having a channel ~~regions-region~~ which ~~extend-extends~~ in the first direction, and

~~_____~~the scanning lines ~~line~~ including a main line portions-portion having a gate electrodes-electrode of the thin film transistors ~~transistor~~ which ~~face-faces~~ the channel ~~regions-region~~ with a gate insulating films-film interposed therebetween and extending in the second direction which intersects the first direction in plan-view; and view,

~~_____~~the main line ~~portions-portion~~ including an inside-groove portions-portion which ~~extend-extends~~ in the second direction and ~~are-is~~ provided an inside grooves-groove which ~~are-is~~ etched in the substrate, and an outside-groove portions-portion which ~~extend extends~~ in the second direction and ~~are-is~~ provided outside the ~~grooves- inside groove~~.

18. (Currently Amended) ~~An~~ The electro-optical device according to Claim 1, comprising, above a substrate:

~~_____ data lines extending in a first direction;~~
~~_____ scanning lines extending in a second direction which intersects the data lines;~~
~~_____ pixel electrodes and thin film transistors provided so as to correspond to~~
~~intersection regions of the data lines and the scanning lines;~~
~~_____ storage capacitors electrically connected to the thin film transistors and the~~
~~pixel electrodes, dielectric films which constitute the storage capacitors being made of a~~
~~plurality of layers including different materials and one of the plurality of layers being made~~
~~of a material having a higher dielectric constant than those of the other layers;~~

a plurality of the pixel electrodes are arranged in a plane and include a first pixel electrode group which is inversely driven at a first period and a second pixel electrode group which is inversely driven at a second period which is complementary to the first period,

at least one of the data lines and/or line or the shielding layers-layer including a main line portions-portion which are-is extended to an upper sides-side of the scanning lines line so as to interest-intersect the scanning lines, line, and an overhanging portions-portion which overhang-along-overhangs the scanning lines; line;

a counter electrode which faces the plurality of the pixel electrodes on a counter substrate which is provided opposite to the substrate; and

convex portions being formed on base surfaces of the pixel electrodes on the substrate corresponding to the overhanging portions, the convex portions being regions of gaps between the pixel electrodes, which are adjacent to each other with the scanning lines interposed therebetween in plan view.

19. (Currently Amended) ~~An~~ The electro-optical device according to Claim 1, comprising, above a substrate:

~~_____ data lines extending in a first direction;~~
~~_____ scanning lines extending in a second direction which intersects the data lines;~~

~~_____ pixel electrodes and thin film transistors provided so as to correspond to intersection regions of the data lines and the scanning lines;~~

~~_____ storage capacitors electrically connected to the thin film transistors and the pixel electrodes, dielectric films which constitute the storage capacitors being made of a plurality of layers including different materials and one of the plurality of layers being made of a material having a higher dielectric constant than those of the other layers;~~

a plurality of the pixel electrodes are arranged in a plane and include a first pixel electrode group which is inversely driven at a first period and a second pixel electrode group which is inversely driven at a second period which is complementary to the first period;

a counter electrode which faces the plurality of the pixel electrodes on a counter substrate which is provided opposite to the substrate; and

convex portions formed in regions of gaps between the pixel electrodes which are adjacent to each other in plan ~~view~~; and view,

~~_____ the convex portions having gentle step differences which are formed by removing planarization films which are formed in advance on the convex portions by an etching process and causing the surfaces of the convex portions which are exposed after removing to be recessed.~~

20. (Canceled)

21. (Currently Amended) An electronic apparatus including an electro-optical device, the electro-optical device comprising, above a substrate:

a data lines-line extending in a first direction;

a scanning lines-line extending in a second direction which intersects the data ~~lines~~; line;

a pixel ~~electrodes~~ electrode and a thin film ~~transistors~~ transistor provided so as
to correspond to an intersection ~~regions~~ region of the data ~~lines~~ line and the scanning ~~lines~~
line;

a storage ~~capacitors~~ capacitor electrically connected to the thin film ~~transistors~~
transistor and the pixel ~~electrodes~~; electrode,

dielectric films which constitute the storage ~~capacitors~~ capacitor being made of
a plurality of at least two layers including different materials and one of the plurality of the at
least two layers being made of a material having a higher dielectric constant than ~~these~~ that of
the other ~~layers~~; layer; and

a relay layer that electrically connects the pixel electrode and the storage
capacitor and that at least partially covers the storage capacitor to shade the storage capacitor
from incident light; and

a light shielding layer provided between the data ~~lines~~ line and the pixel
~~electrodes~~; electrode, the light shielding layer being formed along the data ~~lines~~ line and
having a width wider than the width of the data ~~lines~~; line, the light shielding layer being
formed to cover the entire data ~~lines~~ line in plan view; view, the light shielding layer at least
partially covering the storage capacitor.

22. (Withdrawn-Currently Amended) The electro-optical device according to
Claim 13, the surrounding portion extending to entirely surround the semiconductor ~~layers~~
layer from the main line ~~portions~~; portion.

23-24. (Canceled)

25. (New) An electro-optical device comprising, above a substrate:

a data line extending in a first direction;

a scanning line extending in a second direction which intersects the data line;

a pixel electrode and thin film transistor provided so as to correspond to an intersection region of the data line and the scanning line;

a storage capacitor electrically connected to the thin film transistor and the pixel electrode; and

a relay layer that electrically connects the pixel electrode and the storage capacitor and that at least partially covers the storage capacitor to shade the storage capacitor from incident light.